

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000688**Date Inspected:** 22-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island

<b>CWI Name:</b>	Sha Zhi	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Mock-up 89.00	

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to observe Welding and Magnetic Particle Testing (MT) of the Caltrans Mock-up # 89.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA inspector Viars was informed by ZPMC QA Mr. Fu Yuhong that the tack welds of Mock-up # 89.00 skin plate C weld # 26 had two cracks in the mp508 to mp510 juncture. Caltrans QA observed the following, the tack at the left hand edge measured 305 mm with the entire length of the weld cracked. The picture below shows the cracking at the left hand edge tack weld. The tack weld adjacent to weld joint # 34A measured 170 mm in length with a 60 mm crack from left to right. Caltrans QA Viars was informed that the remainder of tack welds were visually accepted by ZPMC. Inspector Viars visually inspected the remainder of tack welds with no relevant indications noted. ZPMC personnel removed the above mentioned tack welds and prepared the bevel for welding. Prior to welding ZPMC QC Mr. Cai Xin Xin performed MT on the Bevel face and adjacent base metal and reported the area to be acceptable.

Caltrans QA Inspector observed ZPMC shop personnel performing Shielded Metal Arc Welding (SMAW) welding at Mock-up # 89.00 Face D sub assembly MA22 longitudinal plate Complete Joint Penetration (CJP) weld # 3 and 4. ZPMC certified welder Mr. Han Xiaofeng performed the tack welding in accordance to WPS-B-P-2211-B-U3b. The following parameters were recorded by Caltrans QA Viars, amperage 200, voltage 28 (voltage recorded by ZPMC) and a travel speed of 135.

The Caltrans QA Inspector performed VT and monitored MT and welding of Mock-up #89.00. Caltrans QA

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Inspector observed that the welding and testing appeared to be in general conformance with AWS D1.5 2002 requirements.



### Summary of Conversations:

As identified within the contents of this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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